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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------------------|---------------------|------------------|
| 10/780,210 | 02/17/2004 | Raj Manakkal | 01014-1006 | 9914 |
| 7590 05/31/2006 | | | | |
| STEPHEN C. CARLSON DITTHAVONG & CARLSON, P.C. 10507 BRADDOCK RD FAIRFAX, VA 22032 | | EXAMINER LIEU, JULIE BICHNGOC | | |
| | | ART UNIT 2612 PAPER NUMBER | | |
| DATE MAILED: 05/31/2006 | | | | |

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/780,210

Applicant(s)

MANAKKAL, RAJ

Examiner

Julie Lieu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 March 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 18-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 18-27 is/are rejected.
- 7) ☒ Claim(s) 28 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. This office action is in response to Applicant's amendment filed March 16, 2006. New claim 27 has been amended.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 28 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term "can be" is indefinite.

Claim Rejections - 35 USC § 103

4. Claims 18-27 rejected under 35 U.S.C. 103(a) as being unpatentable over Huang (US Patent No. 6,194,998).

Claim 18:

Huang discloses a device, thus, a method for replacing a valve stem, comprising:

- a. Disconnecting a lead 65 coupled to a valve pin 80a disposed within the valve stem from a terminal 51 of a battery
- b. Replacing a valve stem; and
- c. Connecting a lead 65 coupled to a valve pin disposed within the replaced valve stem with the terminal of the battery.

See figure 2.

Though the battery contacts 65 and 90 are not “wire” lead, they are functionally equivalent as wire leads.

Claim 19:

The battery 5 is coupled to a tire pressure sensor 4.

Claim 20:

In Huang, when threaded connector 71 is disconnected from 60, the connector is disconnected from the wire lead of another terminal 52 of the battery, and when a new valve stem is connected, the threaded connector 70 of the new valve stem is connected to the wire lead 84 of the other terminal 52 of the battery.

Claim 21:

Huang discloses a device, thus, a method for replacing a valve stem, comprising:

- a. Disconnecting a valve pin 80a disposed within the valve stem from a terminal 51 of a battery;
- b. Removing a valve stem;

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- c. Inserting a new valve stem; and
- d. Connecting a valve pin disposed within the new valve stem with the terminal 51 of the battery.

See figure 2.

Though the battery contacts 65 and 90 are not “wire” lead, they are functionally equivalent as wire leads.

Claim 22:

The battery 5 is coupled to a tire pressure sensor 4.

Claim 23:

In Huang, when threaded connector 71 is disconnected from 60, the connector is disconnected from the lead of another terminal 52 of the battery and when a new valve stem is connected, the threaded connector 70 of the new valve stem is connected to the lead of the other terminal 52 of the battery.

Claim 24:

Huang discloses a valve stem apparatus comprising:

- a. A valve pin 80a coupled to a first terminal 51 of a battery via a first battery contact 65; and
- b. A threaded connector 71 coupled to a second terminal 52 of a battery wherein the valve stem apparatus is replaced by disconnecting the first battery contact from the first terminal and the second battery contact 90 from the second terminal 52.

Though the battery contacts 65 and 90 are not “wire” lead, they are functionally equivalent as wire leads.

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Claim 25:

The battery 5 is coupled to a tire pressure sensor 4.

Claims 26 and 27:

No connectors are shown in Huang to connect the wire leads/battery contacts to either the valve pin or the battery terminals. However, one skilled in the art would have readily recognized that there are connections made by the battery contacts and the battery terminals.

Allowable Subject Matter

5. Claim 28 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Applicant's Arguments

6. Applicant's arguments 11/16/05 have been fully considered but are not deemed persuasive.

Argument 1:

The applicant has argued that "assuming arguendo that Huang's system could be interpreted to enable substitution of battery contacts 65 and 90 with wire leads, the system would not have a reasonable expectation of operability, i.e., success. Because battery housing 6 is

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intended to be screwed onto the outer end portion 71 of the valve housing 7, col. 4, lines 56-60, use of short wire leads would prevent battery housing 7 from rotating. Longer wire leads would lead to excessive bunching, twisting, tangling, and possibly overt stressing of the electro-mechanical junctions between circuit components. Additionally, wire leads would prevent an air compressor head from establishing an appropriate connection when adding air to the tire thus obviating the invention altogether. Furthermore, if a connection could be made, the wires would be crimped and damaged by the process. Finally, detachable connectors could not be used given the limited amount of space available. In all, Huang discloses the express design choice for use of battery contacts with a spring force smaller than coil spring 802 over wire leads to enable battery housing 7 to operate as desired, maintain battery placement external to the air tight chamber, and facilitate replacement of battery cell 5. (col. 5, lines 54-63).”

Argument 2:

The Applicant has asserted that in order to rely on equivalence as a rationale supporting an obviousness rejection, the equivalency must be recognized in the prior art, and cannot be based on applicant's disclosure or the mere fact that the components at issue are functional or mechanical equivalents.

Response to Applicant's ArgumentsResponse to Argument 1:

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It is submitted that “a reasonable expectation of operability, i.e. success” of a device or system can not be determined based merely on the Applicant’s opinion. Further, the structures and/or elements of the device of the present invention are almost the same as the reference as clearly addressed in the rejection above, except for the claimed “wire leads” and “contacts” of the reference. If the Huang device would not operate successfully with wires as alleged by the Applicant, how could the system in the present invention operate?

Response to Argument 2:

The examiner submits that the equivalency is suggested by the reference as stated in the rejection and is not based on Applicant’s disclosure. In other words, the contacts in the reference are functionally equivalent the wire leads of the present invention to provide electrical connections.

For the above reasons, the Applicant’s arguments are not deemed persuasive and thus the rejection is maintained.

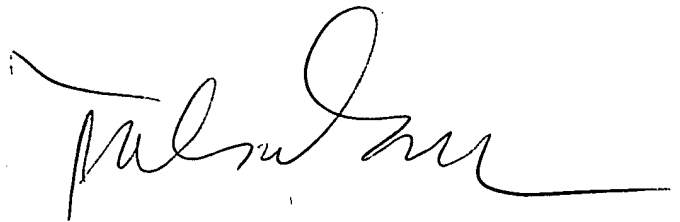
Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julie Lieu whose telephone number is 571-272-2978. The examiner can normally be reached on MaxiFlex.

If attempts to reach the examiner by telephone are unsuccessful, the examiner’s supervisor, Michael Horabik can be reached on 571-272-3068. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'Julie Lieu', with a long horizontal flourish extending to the right.

Julie Lieu
Primary Examiner
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May 27, 06